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PACEMAKER USE IN PATIENTS WITH TRANSTHYRETIN AMYLOIDOSIS IN THAOS: THE TRANSTHYRETIN AMYLOIDOSIS SURVEY

Poster Contributions
Poster Sessions, Expo North
Saturday, March 09, 2013, 3:45 p.m.-4:30 p.m.

Session Title: What Is Unfolding in Cardiac Amyloidosis Research?
Abstract Category: 23. Pericardial/Myocardial Disease
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Background: Transthyretin (TTR) amyloidosis can result in restrictive cardiomyopathy with heart failure as well as conduction abnormalities and arrhythmias. Since cardiac involvement is variable and in part dependent on mutation, we sought to determine the factors associated with pacemaker use in the global Transthyretin Amyloidosis Survey (THAOS) patient registry.

Methods: Baseline clinical characteristics of patients with or without pacemakers were analyzed to determine predictors of pacemaker use. Pacemaker presence was determined by identification of a paced rhythm on an electrocardiography assessment obtained for the registry. The cohort without pacemakers included patients for whom there was no response to the question of pacemaker use on this assessment.

Results: Patients with a pacemaker (n=117) were older (63.1±14.3 vs. 47.5±17.0, P<0.0001), more often men (68% vs 54%, P=0.0024), reported greater beta blocker use (20.5% vs. 9.0%, P<0.0001), and had greater left ventricular wall thickness (18.9 ± 4.8 mm vs. 14.4 ± 10.7 mm, P=0.0007) and brain natriuretic peptide levels (2839.9 ± 5770.6 pg/mL vs. 247.2 ± 1119.1 pg/mL, P<0.0001) compared with those without pacemakers (n=1365). Patients with wild-type (WT) TTR amyloidosis and those who were symptomatic were more likely to have a pacemaker (odds ratio [95% CI], WT: 3.01 [1.86, 4.88], P<0.001; symptomatic: 20.21 [6.39, 63.93], P<0.001) while those with V30M mutation were less likely (0.45 [0.30-0.65], P<0.001). Patients from France and the United States were more likely to have pacemakers (France, 4.12 [2.40, 7.09], P<0.001; US, 2.16 [1.38, 3.37], P<0.001); there was a trend toward lower pacemaker use across Europe (0.69 [0.46, 1.02], P=0.065), which could be a reflection of differences in disease presentation, genotype or regional practice.

Conclusions: More significant cardiac involvement, regional variation and specific mutations in TTR amyloid are associated with pacemaker use in this large global international registry. Further analysis will determine which factors are independently associated with pacemaker use. Data for this abstract are derived from the THAOS registry, which is sponsored by Pfizer Inc.